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MINERAL INDUSTRY SURVEYS

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MOTOR GASOLINES, WINTER 1971-1972

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MOTOR GASOLINES, WINTER 1971-72

by

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INTRODUCTION

The properties of motor fuels sold through service stations in the United States are reported in accordance with a cooperative agreement between the American Petroleum Institute and the Bureau of Mines of the United States Department of the Interior. By agreement with the American Petroleum Institute, identification of the data by item number is confidential.

Analytical data for 5,226 samples that represent the products of 65 companies are included. Company representatives collected the samples during December 1971 and January and February 1972. As in previous surveys, the gasolines covered by this survey include those from both large and small suppliers. Laboratories of various refiners, motor manufacturers, and chemical companies obtained and submitted the data to the Bureau of Mines for compilation. Motor-gasoline survey reports published during the past 10 years are listed on page 5.

Research octane numbers were reported for all samples (5,226) used to prepare this report. Motor octane numbers were not reported for six samples. However, other analytical tests required for a complete gasoline analysis were not available for many of the samples. Tests in this category, the number of test results available and used in this report, and the percent of the total samples represented for that test include the following:

<u>Test</u>	<u>Number of samples used</u>	<u>Percent of total samples</u>
Gravity	4,003	77
Sulfur content	1,212	23
Lead content	3,956	76
Distillation	3,046	58
Vapor pressure	3,000	57

SUMMARY

The characteristics of motor gasolines for winter 1971-72 are summarized in table 1, and for comparison, those for winter 1970-71 are shown in table 2. Trends of some of the more important characteristics for several years are shown in figures 1 and 2. The following data show trends of national average octane numbers during recent years:

	Regular-price		Premium-price	
	Octane number		Octane number	
	Research	Motor	Research	Motor
Summer 1970	93.8	86.3	99.8	92.2
Winter 1970-71	93.9	86.4	99.8	92.2
Summer 1971	94.0	86.3	99.8	92.3
Winter 1971-72	94.0	86.5	99.8	92.3

Tables 3 and 4 show regional average octane numbers of regular- and premium-price fuels.

Data for third grade, intermediate grade, and super-premium gasolines are included in table 5.

DISCUSSION OF DATA

Terms used in the surveys have the following meanings:

District: The designation of a marketing area for collecting samples and data. The present arrangement of 17 districts, developed by the CFR Committee, ^{1/} was selected with reference to the specifications on motor gasolines, refinery locations, population centers, and arteries of commerce such as navigable rivers. The States or parts of States in each district are indicated in the headings of table 3 and are shown in figure 5.

Brand: The gasoline sold within a given price group and by a given trade name.

Item: The index number assigned to a given brand in a given district. The data for each item represent the average of those submitted for that brand in that district. The number of samples represented follows the item number.

^{1/} Coordinating Fuel and Equipment Research Committee (formerly the Coordinating Fuel Research Committee) of the Coordinating Research Council, Inc. From 1935 to 1948 the motor-gasoline surveys were conducted under a cooperative agreement between the Coordinating Research Council and the Bureau of Mines.

Sample: The supply of gasoline obtained at the service station and analyzed in the laboratory.

Table 3 presents by districts data for gravity in degrees API, sulfur, gum, lead, research- and motor-method octane numbers, Reid vapor pressure, and distillation characteristics of the motor fuels collected. The tests were made according to American Society for Testing and Materials standards. 2/

Corrosion test results are not included in the district tables as all the reported numbers are "1," according to the corrosion scale given in table 1 of ASTM D130. 2/

Gum test data are reported to the nearest whole number. The distillation temperatures, corrected to barometric pressure at 760 mm Hg, are those for percent evaporated.

Average values follow the tabulated data in table 3 for the respective grades of fuel shown in each district. The averages of the various properties were computed without reference to the total number of samples represented by each item.

The district averages from table 3 are shown in table 4 with the number of brands and number of samples for regular- and premium-price gasoline in each district. The national averages for each of the properties of fuels sold in each of the 17 districts are given at the end of the table.

Table 5 shows data for third grade, intermediate grade, and super-premium motor gasolines.

Figures 1 and 2 illustrate trends in the national averages of certain properties of regular- and premium-price gasolines, respectively, since the summer of 1946. Averages for the winter surveys are plotted on the lines that represent the years and for the summer surveys between the lines. Octane-number points are connected for successive surveys, but those for Reid vapor pressure and distillation temperatures are plotted separately for summer and winter surveys. Charts that show plots of these properties from 1935 (except winter 1941-42 and summer 1942) are presented in the survey report on motor gasolines for winter 1964-65 and preceding reports. 3/

2/ American Society for Testing and Materials, 1971 Annual Book of ASTM Standards, Part 17, Petroleum Products -- Fuels; Solvents; Burner Fuel Oils; Lubricating Oils, Cutting Oils; Lubricating Greases; Hydraulic Fluids, Philadelphia, Pa., 1,224 pp.

3/ Blade, O.C., Motor Gasolines, Winter 1964-65. Bureau of Mines Petroleum Products Survey No. 40, 38 pp. (in cooperation with the American Petroleum Institute).

Figures 3 and 4 illustrate distribution (frequency) of octane values by numbers of samples for all grades of fuel represented. Each bar represents one-half octane number.

Tables 6 and 7 show the percentages of all samples for each district at each whole octane number level, cumulated according to increasing octane number.

The districts, locations, and number of samples of gasoline represented are listed in table 8 and shown on the map in figure 5. The locations are named for the principal cities in the respective vicinities, and include suburbs and adjacent communities. The area of the circle at each location is proportional to the number of samples obtained. The summary at the end of table 8 lists by district, the number of locations, samples, and the percentages of the latter based on the total reported.

This report does not discuss the significance of the data presented. Reference may be made to the ASTM specification 4/ for motor gasoline and its appendixes, "Significance of ASTM Specifications for Motor Gasoline," at a technical library.

4/ American Society for Testing and Materials, Standard Specifications for Gasoline (D439): 1971 Annual Book of ASTM Standards, Part 17 (see footnote 2), pp. 168-177.

LIST OF MOTOR-GASOLINE SURVEY REPORTS, 1962-72

<u>Author</u>	<u>Season and Year</u>	<u>PPS Report No.</u>	<u>Published</u>	<u>No. of Pages</u>
In cooperation with the American Petroleum Institute				
Blade, O. C.	Winter 1962-63	30	June 1963	32
Do.	Summer 1963	33	Jan. 1964	35
Do.	Winter 1963-64	35	June 1964	40
Do.	Summer 1964	37	Dec. 1964	40
Do.	Winter 1964-65	40	July 1965	38
Do.	Summer 1965	43	Jan. 1966	39
Do.	Winter 1965-66	45	June 1966	38
Do.	Summer 1966	48	Dec. 1966	38
Do.	Winter 1966-67	50	June 1967	38
Do.	Summer 1967	53	Dec. 1967	38
Do.	Winter 1967-68	55	June 1968	39
Do.	Summer 1968	58	Jan. 1969	38
Do.	Winter 1968-69	60	July 1969	38
Blade, O.C. and Ella Mae Shelton	Summer 1969	63	Jan. 1970	38
Shelton, Ella Mae and C.M. McKinney	Winter 1969-70	66	Aug. 1970	47
Do.	Summer 1970	68	Jan. 1971	49
Do.	Winter 1970-71	70	June 1971	54
Shelton, Ella Mae	Summer 1971	73	Jan. 1972	59
Do	Winter 1971-72	This report		

FIGURE 1 - Trends of Certain Characteristics of Regular-Grade Gasolines

LIST OF MOTOR-GASOLINE SURVEY REPORTS, 1969-73

Author	Season and Year	Report No.	Published	Pages
Blade, O.C. and Ellis Mac Shelton	Winter 1969-70	30	June 1969	37
Do.	Summer 1970	31	Jan. 1971	37
Do.	Winter 1970-71	32	June 1971	40
Do.	Summer 1971	33	Dec. 1971	40
Do.	Winter 1971-72	34	June 1972	38
Do.	Summer 1972	35	Jan. 1973	38
Do.	Winter 1972-73	36	June 1973	38
Do.	Summer 1973	37	Dec. 1973	38
Do.	Winter 1973-74	38	June 1974	38
Do.	Summer 1974	39	Dec. 1974	38
Do.	Winter 1974-75	40	June 1975	38
Do.	Summer 1975	41	Jan. 1976	38
Do.	Winter 1975-76	42	June 1976	38
Do.	Summer 1976	43	Dec. 1976	38
Do.	Winter 1976-77	44	June 1977	38
Do.	Summer 1977	45	Dec. 1977	38
Do.	Winter 1977-78	46	June 1978	38
Do.	Summer 1978	47	Jan. 1979	38
Do.	Winter 1978-79	48	June 1979	38
Do.	Summer 1979	49	Dec. 1979	38
Do.	Winter 1979-80	50	June 1980	38
Do.	Summer 1980	51	Dec. 1980	38
Do.	Winter 1980-81	52	June 1981	38
Do.	Summer 1981	53	Dec. 1981	38
Do.	Winter 1981-82	54	June 1982	38
Do.	Summer 1982	55	Jan. 1983	38
Do.	Winter 1982-83	56	June 1983	38
Do.	Summer 1983	57	Dec. 1983	38
Do.	Winter 1983-84	58	June 1984	38
Do.	Summer 1984	59	Dec. 1984	38
Do.	Winter 1984-85	60	June 1985	38
Do.	Summer 1985	61	Jan. 1986	38
Do.	Winter 1985-86	62	June 1986	38
Do.	Summer 1986	63	Dec. 1986	38
Do.	Winter 1986-87	64	June 1987	38
Do.	Summer 1987	65	Dec. 1987	38
Do.	Winter 1987-88	66	June 1988	38
Do.	Summer 1988	67	Jan. 1989	38
Do.	Winter 1988-89	68	June 1989	38
Do.	Summer 1989	69	Dec. 1989	38
Do.	Winter 1989-90	70	June 1990	38
Do.	Summer 1990	71	Dec. 1990	38
Do.	Winter 1990-91	72	June 1991	38
Do.	Summer 1991	73	Jan. 1992	38
Do.	Winter 1991-92	74	June 1992	38

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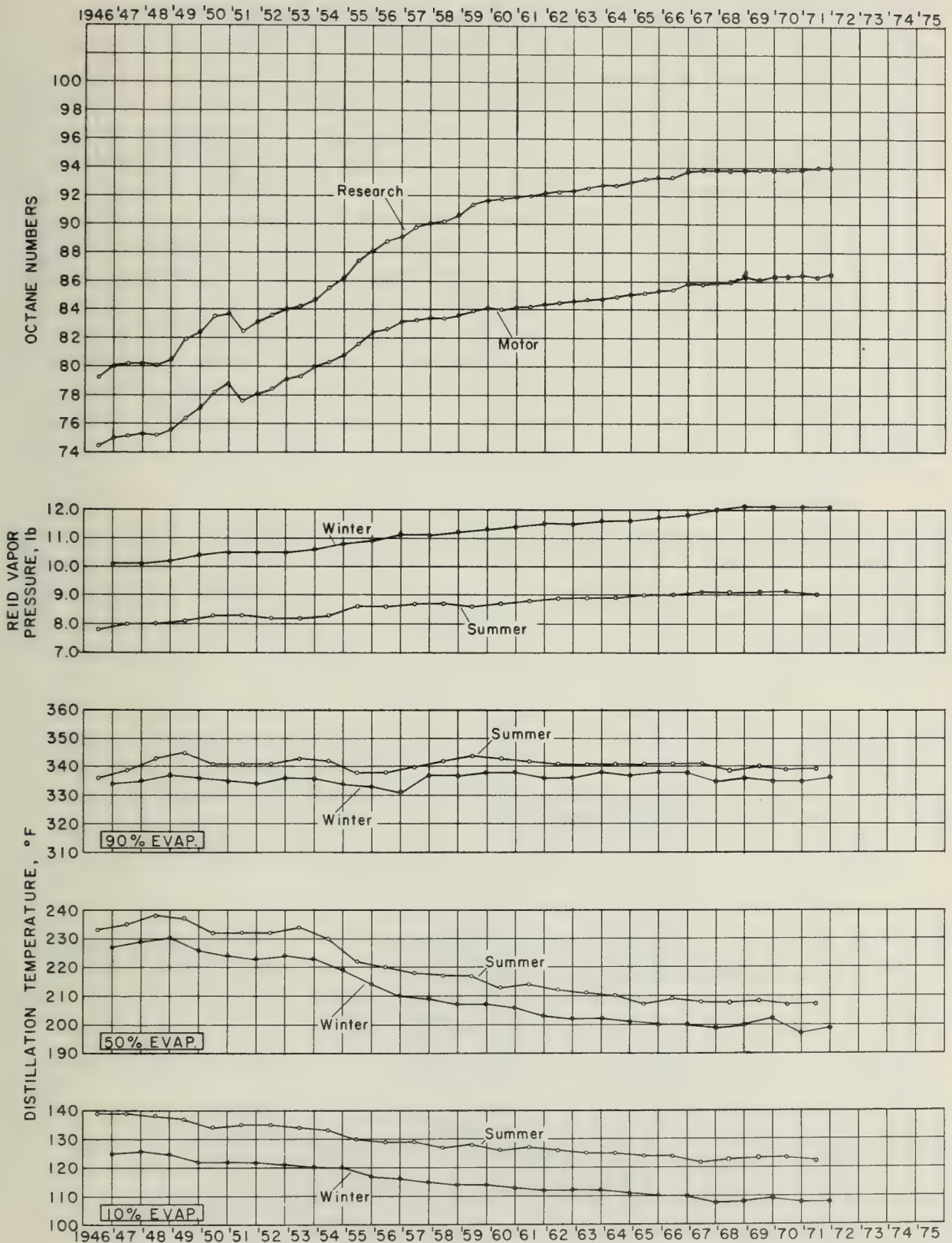


FIGURE 1.—Trends of Certain Characteristics of Regular-Price Gasolines.

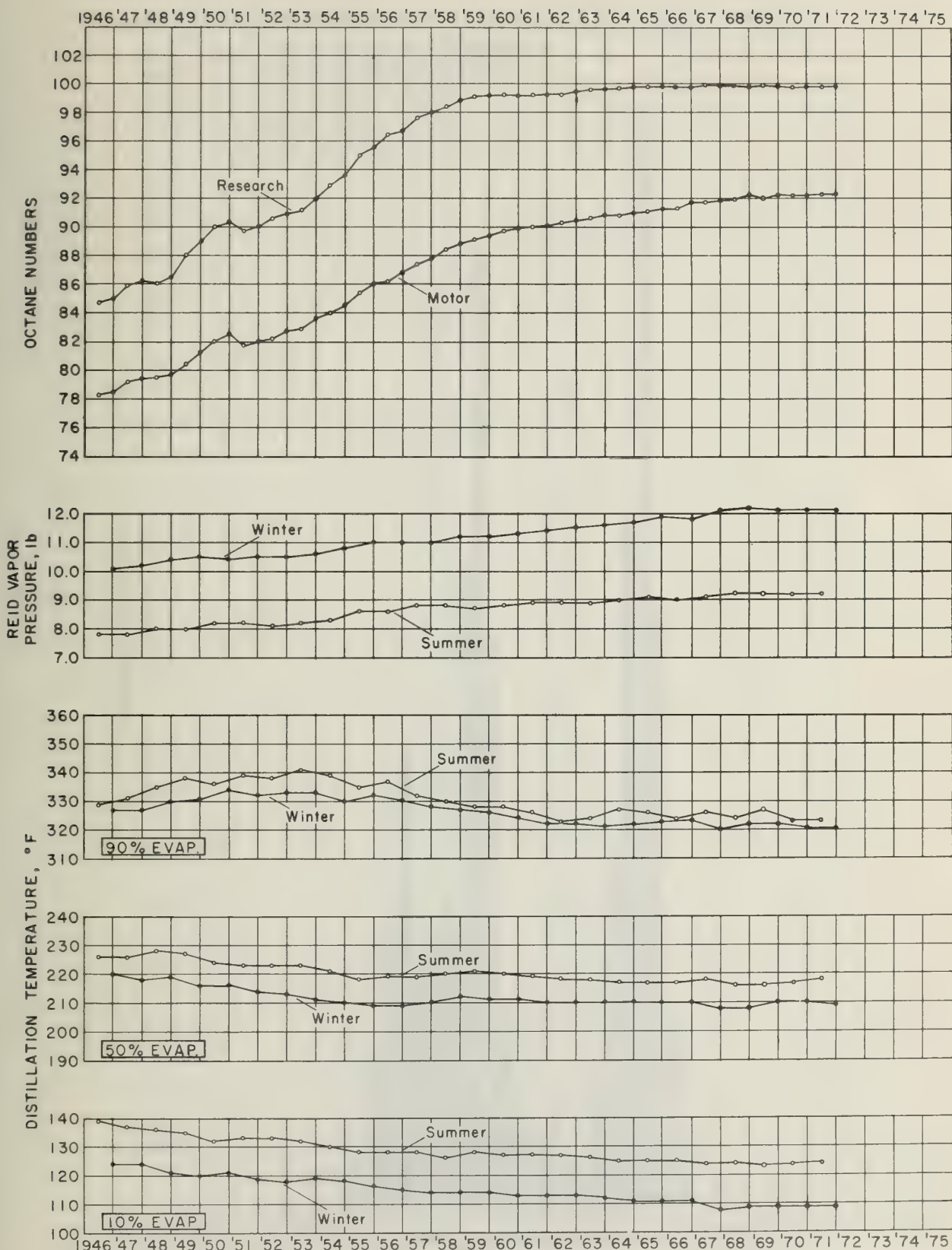


FIGURE 2.—Trends of Certain Characteristics of Premium-Price Gasolines.

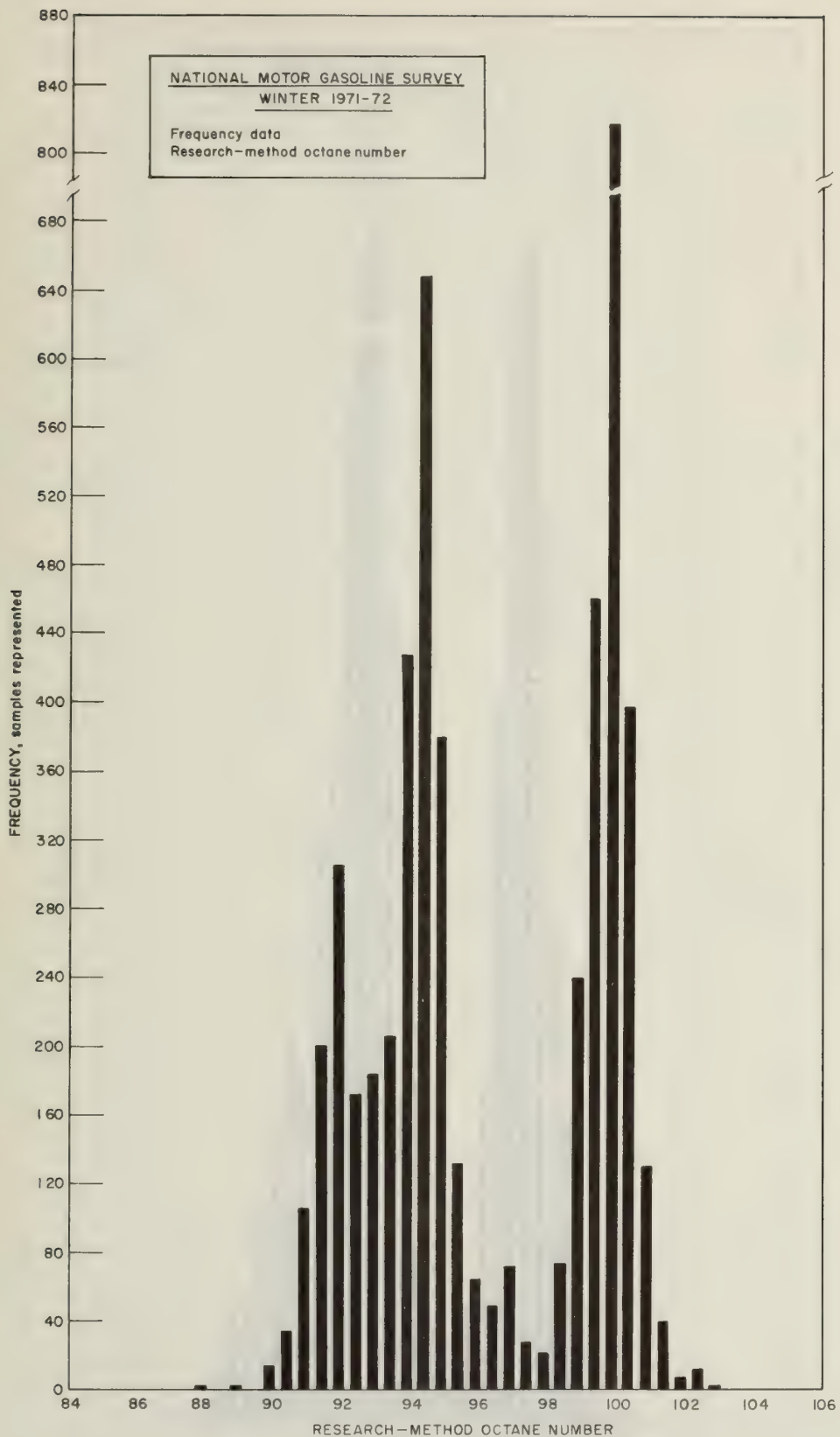


FIGURE 3.—Distribution of Research - Method Octane Numbers.

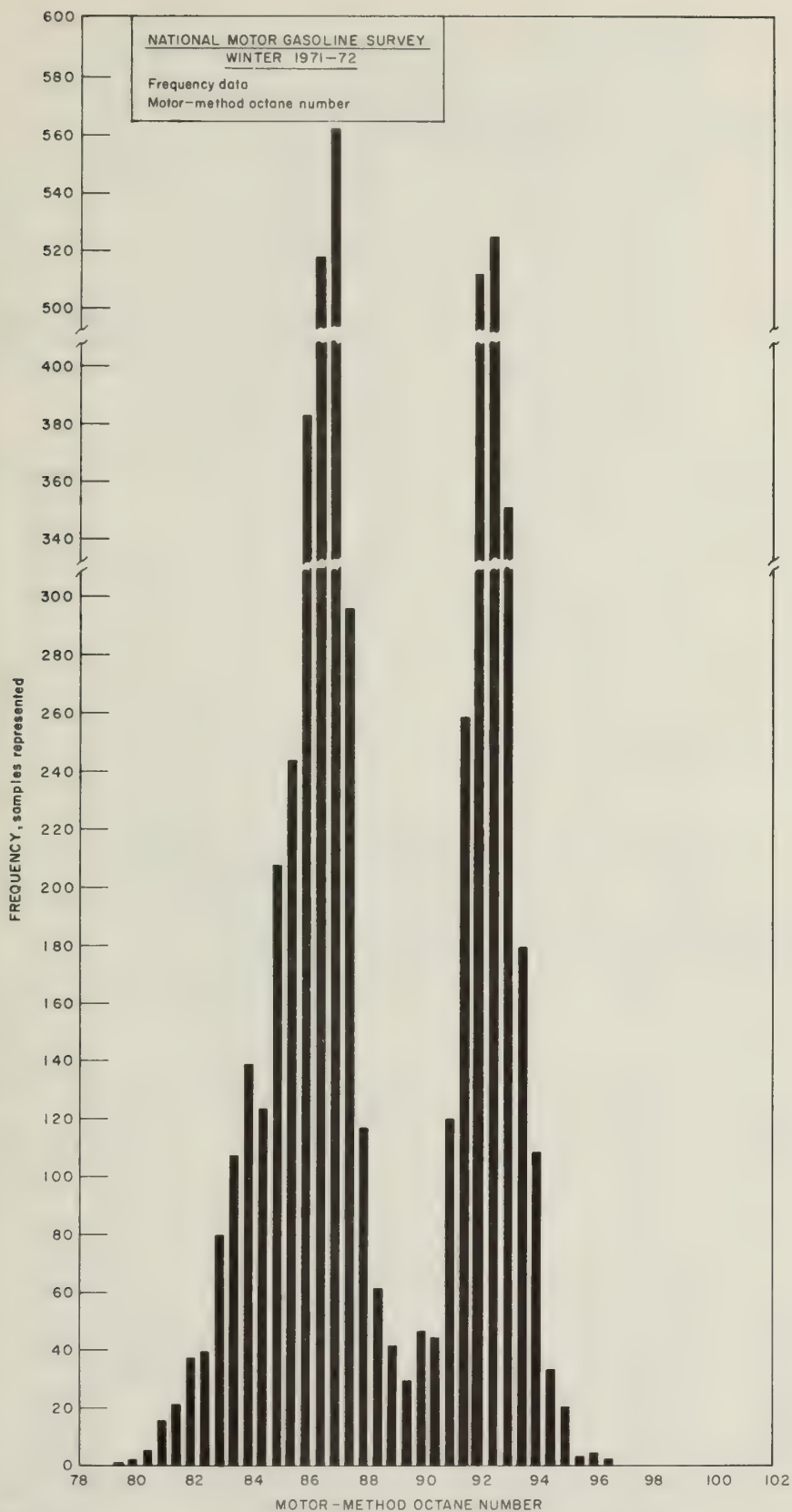


FIGURE 4.—Distribution of Motor—Method Octane Numbers.

TABLE 1. - Summary of values, motor gasoline survey, winter 1971-72

Test	ASTM method	Regular-price gasoline	Premium-price gasoline
		Average	Average
Gravity, °API	D287	62.7	62.9
Corrosion, No.	D130	1	1
Sulfur content, wt %	D1266	0.044	0.026
Gum, mg/100 ml	D381	1	1
Lead, g/gal	D526	1.88	2.43
Octane number, Research	D2699	94.0	99.8
Octane number, Motor	D2700	86.5	92.3
Reid vapor pressure, lb	D323	12.1	12.1
Distillation	D86		
Temp, °F			
IBP		84	83
5% evaporated		96	95
10% Do.		108	109
20% Do.		128	132
30% Do.		150	158
50% Do.		199	209
70% Do.		255	253
90% Do.		336	321
95% Do.		369	353
End point		408	398
Residue, vol %		1.0	0.9
Loss, vol %		2.1	2.4

TABLE 2. - Summary of values, motor gasoline survey, winter 1970-71

Test	ASTM method	Regular-price gasoline	Premium-price gasoline
		Average	Average
Gravity, °API	D287	63.1	62.6
Corrosion, No.	D130	1	1
Sulfur content, wt %	D1266	0.039	0.023
Gum, mg/100 ml	D381	1	1
Lead, g/gal	D526	2.02	2.60
Octane number, Research	D2699	93.9	99.8
Octane number, Motor	D2700	86.4	92.2
Reid vapor pressure, lb	D323	12.1	12.1
Distillation	D86		
Temp, °F			
IBP		84	83
5% evaporated		95	95
10% Do.		108	109
20% Do.		127	132
30% Do.		149	158
50% Do.		197	210
70% Do.		253	253
90% Do.		335	321
95% Do.		368	353
End point		406	396
Residue, vol %		1.0	1.0
Loss, vol %		2.1	2.3

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1971-72
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 1 NORTHEAST--CONTINUED

MAINE, MASS., N.H., VT., AND NORTHERN N.Y.

PREMIUM-PRICE GASOLINE

ITEM	SAM- PLES	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NUMBER		RVP, ASTM D323 LB	DISTILLATION, ASTM D86											RES LOSS % %		
						RES, ASTM D2699	MOT, ASTM D2700		R+M --2	TEMPERATURE, F (CORRECTED TO 760 MM HG)		PERCENT EVAPORATED										
										IBP	EP	5	10	20	30	50	70	90	95			
16	10	62.0	0.008	1	1.97	100.0	92.0	96.0	12.7	82	88	103	121	143	202	257	316	345	397	1.0	2.6	
17	9	67.3	.013	1	1.61	100.2	92.5	96.4	13.9	75	84	93	109	128	181	236	290	322	359	1.1	2.7	
18	6	64.2	.019	0	2.34	100.0	92.4	96.2	12.9	79	92	105	128	153	204	249	329	359	403	1.0	3.3	
19	4	61.5	.019	1	2.92	100.0	92.6	96.3	13.0	77	91	102	121	142	201	259	332	361	395	1.0	2.6	
20	4	54.9	.011	2	.00	100.8	89.9	95.4	12.5	76	89	105	132	164	217	248	297	322	369	.8	3.0	
21	1	62.3	.017	1	2.39	100.2	92.2	96.2	11.1	81	91	103	128	156	213	258	320	349	398	1.0	3.0	
22	3	61.2	-	-	-	99.8	92.5	96.2	13.2	96	100	106	121	139	196	280	324	341	373	.8	3.0	
23	7	59.2	.019	2	2.28	100.2	92.4	96.3	12.7	82	95	104	121	143	215	281	332	355	393	1.0	2.3	
24	10	60.8	.008	1	2.58	100.1	92.8	96.5	12.1	79	91	104	127	152	214	266	324	353	398	1.1	2.2	
25	3	62.7	.047	-	2.35	100.2	92.1	96.2	12.8	80	90	106	132	159	208	246	324	364	416	.8	2.7	
26	5	61.5	.022	1	2.80	100.3	92.2	96.3	13.5	73	84	95	116	141	203	255	329	366	408	1.0	3.7	
27	10	64.0	.022	1	2.23	100.1	92.3	96.2	11.9	81	92	107	133	161	211	248	307	337	380	1.0	2.6	
28	6	61.4	.054	-	3.07	100.6	92.0	96.3	13.0	79	89	101	122	149	206	258	330	354	384	1.1	2.2	
29	1	56.3	.016	1	2.57	101.3	91.3	96.3	11.2	76	85	107	118	144	220	263	315	343	396	1.0	3.0	
30	3	62.5	.019	1	2.81	100.4	92.0	96.2	13.4	87	92	112	135	158	206	252	323	354	386	1.0	4.1	
AVERAGE		61.5	.021	1	2.46	100.3	92.1	96.2	12.7	80	90	104	124	149	206	257	319	348	390	1.0	2.9	
SAMPLES	82																					

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1971-72
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED
DIST. 2 MID-ATLANTIC COAST--CONTINUED
R.I., CONN., N.J., DEL., MD., VA., CENTRAL AND SOUTHERN N.Y., AND EASTERN PA.

PREMIUM-PRICE GASOLINE

ITEM	SAM- PLES	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NUMBER		RVP, ASTM D323 LB	DISTILLATION, ASTM D86											RES LOSS %			
						RES, ASTM D2699	MOT., ASTM D2700		R+M ---	TEMPERATURE, F (CORRECTED TO 760 MM HG)	PERCENT EVAPORATED												
											IBP											EP	
												5	10	20	30	50	70	90	95				
52	17	55.6	0.010	1	0.02	101.0	90.3	95.7	12.5	83	93	106	130	158	222	253	306	333	376	0.8 2.8			
53	18	61.1	.011	1	2.54	100.1	93.4	96.8	12.5	82	94	104	123	148	205	265	326	355	398	1.0 2.8			
54	16	63.6	.022	0	2.21	100.3	92.5	96.4	13.3	80	91	105	125	153	209	251	332	364	406	.8 3.3			
55	8	63.3	-	-	2.49	100.2	93.0	96.6	12.8	77	90	106	130	159	212	257	329	363	407	.7 2.1			
56	22	67.5	.012	1	1.72	100.7	92.6	96.7	14.4	77	85	96	112	131	179	231	298	332	372	1.0 3.0			
57	24	62.8	.020	1	2.20	100.1	92.2	96.2	12.3	81	93	105	125	148	204	252	310	342	387	1.1 2.3			
58	11	64.5	.016	1	2.49	99.9	93.1	96.5	12.3	86	95	105	123	143	203	252	325	357	403	1.1 2.3			
59	28	58.4	.010	1	2.13	100.1	92.4	96.3	11.6	83	93	106	128	155	217	267	326	353	392	1.0 2.2			
60	20	60.7	.017	0	2.06	100.1	92.5	96.3	12.6	82	92	106	127	152	211	261	321	348	395	1.0 2.9			
61	12	60.4	.028	1	2.74	100.4	91.8	96.1	13.1	78	94	103	124	149	202	256	319	347	390	1.1 3.0			
62	21	61.3	.029	1	2.74	100.5	92.1	96.3	13.8	78	88	98	119	144	206	259	332	365	407	.9 3.3			
63	24	62.5	.016	1	2.77	100.4	92.3	96.4	12.4	82	91	106	131	158	209	250	309	337	380	1.0 2.7			
64	13	60.3	.042	1	2.74	100.8	91.8	96.3	13.6	78	86	101	123	150	213	269	330	351	381	.8 3.5			
65	3	60.5	-	-	2.44	100.2	93.3	96.8	12.3	80	94	107	130	156	217	266	328	354	398	1.0 1.5			
66	1	62.5	.046	1	3.00	100.4	92.7	96.6	14.0	80	-	102	127	155	213	260	340	-	418	.3 2.2			
67	1	61.4	.029	1	2.61	100.5	92.3	96.4	13.6	85	-	100	127	154	214	262	330	-	389	1.0 5.0			
68	9	57.5	.018	0	2.58	101.2	91.8	96.5	12.2	81	94	109	133	161	222	264	312	339	387	.9 2.7			
69	4	63.7	.060	1	2.76	100.3	93.2	96.8	13.9	75	82	97	123	153	211	259	334	366	405	1.1 3.2			
70	15	60.7	.023	1	2.86	100.4	92.0	96.2	14.0	81	89	101	124	151	208	258	326	361	403	.9 4.8			
AVERAGE		61.5	.024	1	2.37	100.4	92.4	96.4	13.0	80	91	103	125	151	209	257	323	351	394	.9 2.9			
SAMPLES		267																					

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1971-72
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 9 NORTH PLAINS
MINN., N. DAK., AND S. DAK.

REGULAR-PRICE GASOLINE

ITEM	SAM- PLES	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NUMBER		RVP, ASTM D323 LB	DISTILLATION, ASTM D86												RES LOSS %
						RES, ASTM D2699	HDT, ASTM D2700		R+M --	TEMPERATURE, F (CORRECTED TO 760 MM HG)											
										PERCENT EVAPORATED											
										IBP	5	10	20	30	50	70	90	95	EP		
296	6	66.9	0.023	-	1.57	92.5	83.7	88.1	12.1	67	99	114	137	161	212	272	363	328	406	1.0	2.2
297	3	62.2	.063	-	1.51	91.9	84.9	88.4	13.0	74	86	98	117	137	188	253	340	368	406	.7	1.3
298	3	64.9	.071	-	.29	93.2	85.4	89.3	12.5	80	96	110	134	164	212	252	326	364	400	.9	1.1
299	2	-	-	-	-	92.4	81.5	87.0	12.3	89	99	115	136	163	218	282	382	-	416	1.1	2.5
300	3	62.2	.093	-	1.35	93.0	84.5	88.8	11.2	80	93	108	132	158	208	272	345	372	408	.7	1.3
301	3	63.4	.085	-	2.09	92.3	85.4	88.9	12.0	78	94	106	126	145	190	246	333	376	420	.8	1.2
302	3	64.6	.047	-	1.67	92.1	85.0	88.6	12.5	78	94	106	126	144	186	240	326	360	418	.8	1.2
303	4	62.1	.046	-	1.97	92.1	85.5	88.8	12.3	80	96	108	128	149	192	250	340	378	420	1.0	1.0
304	2	64.4	-	-	1.44	91.8	84.6	88.2	12.1	80	98	111	130	148	192	248	338	376	420	1.0	1.0
305	4	61.7	.073	-	1.41	92.0	85.0	88.5	11.6	84	99	112	133	156	208	276	353	380	416	.9	1.8
306	3	63.5	.086	-	2.44	92.6	85.4	89.0	12.0	80	96	106	124	144	186	236	320	354	416	.7	1.3
307	6	62.3	.094	-	.89	92.4	83.2	87.8	12.7	86	96	110	132	158	214	279	372	368	418	1.1	2.2
308	3	61.3	.044	-	1.30	92.9	84.9	88.9	12.6	75	91	104	128	154	212	275	348	374	412	.7	1.3
AVERAGE		63.3	.066	-	1.49	92.4	84.5	88.5	12.2	81	95	108	129	152	201	260	345	367	414	.9	1.5
SAMPLES		45																			

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1971-72
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 10 CENTRAL PLAINS
NEBR., CENTRAL AND WESTERN IOWA, NW MO., AND NORTHERN KANS.

REGULAR-PRICE GASOLINE

ITEM	SAMPLES	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NUMBER		RVP, ASTM D323 LB	DISTILLATION, ASTM D86											RES LOSS %	
						RES, ASTM D2699	MDT, ASTM D2700		TEMPERATURE, F (CORRECTED TO 760 MM HG)	PERCENT EVAPORATED											
										R+M ---											
											IRP	5	10	20	30	50	70	90	95		EP
324	22	63.0	0.066	2	2.23	93.6	85.1	89.4	84	98	112	135	158	204	250	318	349	382	0.9	2.2	
325	12	64.0	.041	-	1.88	93.3	86.2	89.8	84	98	110	127	147	192	248	327	363	407	.8	1.3	
326	1	62.0	.023	1	1.46	92.0	86.4	89.2	83	93	104	123	146	200	249	320	360	423	1.0	3.0	
327	3	61.1	.040	-	2.42	94.2	87.5	90.9	86	106	118	140	162	210	262	338	374	414	.9	1.1	
328	3	67.1	-	-	1.22	92.6	86.1	89.4	84	95	103	117	133	180	237	302	335	394	.9	1.1	
329	3	-	-	-	-	93.8	86.8	90.3	88	98	110	128	149	195	250	351	398	407	1.0	1.7	
330	5	65.2	.037	1	1.91	92.1	85.9	89.0	78	96	111	132	157	209	258	334	379	412	.9	2.2	
331	3	61.7	.035	-	1.37	94.7	86.8	90.8	80	94	108	130	152	208	268	336	360	380	.9	1.1	
332	7	63.0	.062	-	2.60	94.0	87.0	90.5	85	97	109	128	148	199	255	331	363	412	1.0	1.5	
333	1	61.1	.119	1	2.60	92.2	84.4	88.3	78	100	112	134	158	210	268	352	384	430	1.0	2.0	
334	21	64.9	.031	1	1.56	92.5	85.9	89.2	84	96	106	122	140	186	244	327	362	403	1.0	1.6	
335	7	64.7	.062	-	1.94	93.4	86.7	90.1	84	100	112	131	149	188	246	334	371	414	1.2	1.1	
336	6	65.4	.033	-	1.58	93.2	85.9	89.6	84	99	109	127	146	192	244	327	361	412	1.0	1.0	
337	12	64.1	-	-	1.61	92.3	86.0	89.2	84	92	106	124	146	202	267	363	386	418	1.0	2.5	
338	3	62.0	.034	-	2.71	94.1	88.3	91.2	84	105	118	140	160	198	244	322	354	382	.8	1.2	
339	12	62.2	.031	-	1.39	93.3	85.9	89.6	86	100	112	133	152	200	262	337	372	417	1.0	1.3	
340	14	63.8	.036	1	1.94	92.6	85.9	89.3	85	97	109	127	147	190	245	337	376	414	.9	1.8	
341	3	62.1	.028	-	1.80	94.4	86.7	90.6	84	102	116	138	158	204	260	324	352	400	.7	1.3	
342	3	61.9	.022	-	1.99	94.4	87.1	90.8	82	100	112	132	151	200	260	334	358	390	.7	1.3	
343	3	61.1	.058	-	1.71	94.5	86.6	90.7	84	100	115	139	164	212	268	340	372	410	.6	1.4	
344	3	61.9	.060	-	2.66	94.3	87.0	90.7	84	104	118	140	160	202	250	326	356	396	.5	1.5	
AVERAGE		63.1	.045	1	1.93	93.4	86.4	89.9	84	99	111	131	152	199	254	332	366	406	.9	1.6	
SAMPLES		147																			

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TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1971-72
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 12 SOUTH TEXAS--CONTINUED

PREMIUM-PRICE GASOLINE

ITEM	SAM- PLES	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NUMBER		RVP, ASTM D323 LB	DISTILLATION, ASTM D86											RES LOSS % X				
						RES, ASTM D2699	R+M --- 2		TEMPERATURE, F (CORRECTED TO 760 MM HG)															
									PERCENT EVAPORATED															
									IBP	5	10	20	30	50	70	90	95	EP						
422	1	55.6	-	1	0.10	100.6	91.2	95.9	10.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
423	8	60.1	0.018	1	2.71	99.2	92.3	95.8	10.3	88	101	112	131	150	201	258	335	363	406	-	-	-	-	1.1 1.4
424	3	62.8	.022	-	2.98	100.0	92.6	96.3	12.3	81	92	105	130	160	208	252	323	353	402	-	-	-	-	1.0 3.0
425	9	60.6	.013	-	2.90	99.6	92.4	96.0	11.9	87	97	112	137	166	215	256	330	361	403	-	-	-	-	1.1 2.1
426	2	63.0	.019	-	2.77	99.8	92.3	96.1	12.9	82	101	107	142	172	218	262	338	363	402	-	-	-	-	1.0 2.5
427	1	64.6	.025	-	1.88	99.5	92.0	95.8	12.4	83	99	114	140	167	213	255	328	360	408	-	-	-	-	.7 1.8
428	3	63.9	.016	-	4.22	99.8	88.9	94.4	9.8	94	109	115	124	134	163	228	311	338	370	-	-	-	-	1.0 1.0
429	11	64.2	.006	1	1.37	100.6	92.6	96.6	11.3	84	98	109	125	141	190	235	289	311	357	-	-	-	-	.9 1.5
430	10	62.7	.012	1	2.79	100.0	92.6	96.3	11.3	85	98	111	130	151	201	245	304	337	380	-	-	-	-	1.0 1.8
431	7	66.3	.018	-	2.18	99.8	93.5	96.7	11.0	85	99	109	125	143	198	243	301	334	394	-	-	-	-	1.0 1.4
432	6	65.1	.008	-	2.73	99.9	94.3	97.1	11.6	82	93	106	128	153	208	252	333	370	417	-	-	-	-	1.0 1.5
433	4	57.8	.005	1	3.03	100.1	93.3	96.7	11.5	80	91	103	120	142	206	273	326	347	377	-	-	-	-	1.0 2.5
434	3	61.9	.025	-	3.17	100.0	91.1	95.6	12.6	80	93	104	122	143	191	229	287	323	385	-	-	-	-	.7 1.8
435	9	59.6	.013	-	2.44	100.0	93.4	96.7	11.7	83	98	110	131	153	210	264	324	350	400	-	-	-	-	1.0 1.8
436	11	61.4	.013	2	2.63	99.9	92.5	96.2	11.0	87	101	115	143	170	214	250	301	325	371	-	-	-	-	1.0 2.0
437	1	62.2	-	-	3.39	100.8	91.6	96.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AVERAGE	89	62.0	.015	1	2.58	100.0	92.3	96.2	11.4	84	98	109	131	153	203	250	316	345	391	-	-	-	-	1.0 1.9

SAMPLES

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1971-72
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 13 SOUTH MT. STATES
SW KANS., OKLA. AND TEX. PANHANDLES, W. TEX., N. MEX., COLO., UTAH, ARIZ., NEV., AND E. CALIF.

REGULAR-PRICE GASOLINE

ITEM	SAM- PLES	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NUMBER		RVP, ASTM D323 LB	DISTILLATION, ASTM D86											RES LOSS % %		
						RES, ASTM D2699	MOT, ASTM D2700		R+M --2	TEMPERATURE, F (CORRECTED TO 760 MM HG)												
										PERCENT EVAPORATED												
										IBP	5	10	20	30	50	70	90	95	EP			
438	6	61.9	-	-	1.85	91.7	84.6	88.2	11.5	86	100	113	133	155	204	265	358	387	422	1.3	1.5	
439	11	63.1	0.033	2	1.75	91.3	85.2	88.3	11.6	87	99	116	140	163	206	255	338	357	404	1.0	2.2	
440	25	62.1	.049	2	1.86	92.8	85.9	89.4	11.4	84	94	109	130	150	197	251	334	373	413	1.0	2.4	
441	1	65.7	.039	-	1.25	91.0	84.8	87.9	-	-	-	-	-	-	-	-	-	-	-	-	-	
442	7	63.4	.038	3	1.20	92.1	85.6	88.9	12.3	89	99	114	135	156	200	254	357	393	419	1.1	2.3	
443	24	64.3	.020	1	2.20	92.1	86.4	89.3	10.7	89	103	114	132	151	192	243	331	374	414	1.1	1.2	
444	16	61.6	.090	4	2.29	93.6	86.2	89.9	10.9	90	104	116	137	160	209	267	344	378	411	.9	1.3	
445	3	61.1	-	-	1.72	92.1	83.8	88.0	10.6	86	103	117	140	164	215	274	351	381	426	.9	1.6	
446	22	66.3	-	-	1.53	91.7	85.3	88.5	11.2	91	103	113	128	144	182	232	327	372	413	1.0	1.3	
447	12	66.5	-	-	2.60	91.5	86.1	88.8	11.7	86	100	111	131	152	195	241	327	371	408	1.0	1.5	
448	18	61.5	.030	1	2.03	93.0	86.9	90.0	10.2	90	104	116	134	153	197	252	333	367	404	1.0	1.3	
449	3	62.7	-	-	1.04	91.7	85.5	88.6	11.8	83	94	105	125	147	198	257	328	363	416	.8	1.7	
450	23	62.8	.043	2	2.10	92.2	85.9	89.1	11.6	84	97	111	132	154	200	249	335	378	421	1.0	2.0	
451	28	61.4	.037	3	1.68	93.0	85.8	89.4	11.1	87	97	113	134	155	200	250	340	377	415	1.0	2.0	
452	41	62.0	.036	1	2.18	93.0	85.5	89.3	10.1	89	103	118	141	164	210	260	333	363	398	1.1	1.7	
453	15	61.2	.060	0	1.87	94.0	85.8	89.9	11.3	84	94	110	135	161	211	265	340	379	424	.9	3.0	
AVERAGE		63.0	.043	2	1.82	92.3	85.6	89.0	11.2	87	100	113	134	155	201	254	338	374	414	1.0	1.8	
SAMPLES	255																					

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1971-72
 AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED
 DIST. 13 SOUTH MT. STATES--CONTINUED
 SN KANS., OKLA. AND TEX. PANHANDLES, W. TEX., N. MEX., COLO., UTAH, ARIZ., NEV., AND E. CALIF.

PREMIUM-PRICE GASOLINE

ITEM	SAM- PLES	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NUMBER		RVP, ASTM D323 LB	DISTILLATION, ASTM D86											RES LOSS %	
						RES, ASTM D2699	MOT, ASTM D2700		R+M ---	TEMPERATURE, F (CORRECTED TO 760 MM HG)											
										PERCENT EVAPORATED											
										IBP	5	10	20	30	50	70	90	95	EP		
454	6	60.0	-	-	2.88	98.6	90.3	94.5	11.5	86	99	116	145	176	231	277	347	375	415	1.3	1.8
455	11	62.7	0.028	2	2.07	97.4	89.8	93.6	11.7	85	97	111	135	160	210	256	331	344	393	1.0	2.5
456	25	61.5	.020	2	2.47	98.9	91.7	95.3	11.3	84	95	109	131	156	211	258	327	365	409	1.0	2.1
457	1	65.1	.024	-	1.88	97.1	90.0	93.6	-	-	-	-	-	-	-	-	-	-	-	-	-
458	16	55.5	.025	2	2.41	97.9	91.5	94.7	12.1	87	98	112	135	159	209	255	332	366	402	1.0	2.1
459	24	64.9	.030	4	2.40	99.2	92.9	96.1	10.8	88	102	114	135	159	207	244	315	358	397	1.0	1.3
460	16	63.5	.050	2	2.65	99.3	91.7	95.5	10.7	87	103	116	139	167	216	260	333	369	405	1.1	1.4
461	3	57.5	-	-	2.95	97.4	88.4	92.9	11.3	84	101	121	156	187	235	279	351	380	421	.9	1.6
462	22	66.2	.002	-	1.85	98.5	91.2	94.9	11.4	90	101	111	127	145	198	241	318	366	405	1.0	1.4
463	12	69.4	-	-	2.55	98.7	93.4	96.1	11.5	88	100	110	127	150	200	242	330	377	413	1.1	1.0
464	18	60.5	.030	2	2.64	99.7	92.3	96.0	10.2	90	104	117	141	167	214	249	307	341	383	1.0	1.4
465	3	63.8	-	-	1.97	96.7	89.7	93.2	12.4	82	95	106	127	151	207	257	333	369	428	1.0	1.0
466	23	63.6	.038	2	2.59	98.8	92.1	95.5	11.5	84	97	111	133	156	209	253	328	370	406	1.0	1.8
467	28	62.3	.029	2	2.49	99.1	92.0	95.6	11.1	87	97	115	140	165	215	259	331	360	401	1.0	2.4
468	40	62.3	.023	2	2.50	98.7	91.6	95.2	10.2	89	104	118	141	164	209	253	317	349	385	1.0	1.6
469	15	60.5	.028	1	2.50	99.0	91.6	95.3	11.1	84	94	111	137	162	214	263	332	367	416	1.0	2.8
AVERAGE		63.1	.027	2	2.43	98.4	91.3	94.9	11.3	86	99	113	137	162	212	256	329	364	405	1.0	1.7
SAMPLES	263																				

TABLE 3. - MOTOR GASOLINE SURVEY, WINTER 1971-72
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 17 SOUTH CALIFORNIA--CONTINUED

PREMIUM-PRICE GASOLINE

ITEM	SAM- PLES	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NUMBER			RVP, ASTM D323 LR	DISTILLATION, ASTM D86											RES LOSS % %
						RES, ASTM D2699	MOT, ASTM D2700	R+M --=		TEMPERATURE, F (CORRECTED TO 760 MM HG)											
										PERCENT EVAPORATED											
										IBP	5	10	20	30	50	70	90	95	EP		
551	9	59.1	0.047	1	3.06	99.9	92.2	96.1	11.9	85	94	106	127	153	219	271	325	347	393	1.0	2.6
552	3	55.8	-	-	2.72	100.0	92.2	96.1	10.0	87	110	127	156	181	224	262	314	340	398	.7	1.3
553	4	59.1	.029	-	2.58	99.8	92.0	95.9	12.5	84	95	108	131	158	219	266	322	352	404	.9	2.1
554	6	58.4	-	-	2.80	99.8	92.1	96.0	11.0	89	100	118	143	171	222	267	337	367	415	.9	2.8
555	7	58.6	.030	0	2.71	100.0	91.7	95.9	9.1	91	107	120	141	164	214	262	317	350	392	1.2	1.4
556	3	54.4	-	-	3.55	100.6	92.1	96.4	9.2	90	112	132	164	195	240	281	342	370	423	.7	1.3
557	16	60.0	.039	1	2.49	100.1	91.5	95.8	10.5	89	102	117	140	167	212	255	318	354	396	1.0	2.1
558	9	57.7	.038	1	1.75	100.1	91.3	95.7	11.1	87	97	115	139	166	218	262	329	359	415	1.0	2.6
559	14	61.6	.071	2	2.85	100.0	91.5	95.8	11.0	88	98	113	132	151	198	245	312	344	395	1.0	2.1
560	12	60.1	.044	1	2.78	99.8	91.5	95.7	9.5	90	108	120	142	169	212	255	321	351	396	1.0	1.4
561	11	57.2	.028	1	2.99	99.5	91.5	95.5	11.6	85	96	109	134	162	222	270	341	381	423	1.1	3.0
AVERAGE		58.4	.041	1	2.75	100.0	91.6	95.9	10.7	88	102	117	141	167	218	263	325	356	405	1.0	2.1
SAMPLES	94																				

TABLE 4. - MOTOR GASOLINE SURVEY, WINTER 1971-72
AVERAGE DATA FOR BRANDS IN EACH DISTRICT

REGULAR-PRICE GASOLINE																						
DISTRICT NO. AND NAME	NO. OF BRANDS	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NUMBER			RVP, ASTM D323 LB	DISTILLATION, ASTM D86											RES LOSS %	
						RES, ASTM D2699	MOT, ASTM D2700	R+M ---		TEMPERATURE, F (CORRECTED TO 760 MM HG)												
										PERCENT EVAPORATED												
										IBP	5	10	20	30	50	70	90	95	EP			
1 NORTHEAST	15	75	63.1	0.039	1	1.89	95.2	87.5	91.4	12.6	80	93	104	124	146	196	257	336	367	401	1.0 2.5	
2 MID-ATLANTIC COAST	21	277	62.3	.039	1	1.89	94.9	87.1	91.0	12.6	81	92	104	125	148	199	260	340	370	408	1.0 2.7	
3 SOUTHEAST	19	203	62.1	.043	1	2.14	94.6	86.9	90.8	11.4	83	98	109	129	151	199	255	337	369	405	1.1 1.9	
4 APPALACHIAN	24	190	62.6	.034	1	1.90	94.8	87.1	91.0	12.9	82	93	103	124	146	196	256	337	370	411	1.0 2.8	
5 MICHIGAN	17	115	62.8	.033	1	1.72	94.8	86.7	90.8	13.0	81	90	101	122	146	199	257	337	370	410	0.9 2.9	
6 NORTH ILLINOIS	14	81	63.3	.056	2	1.83	94.4	86.9	90.7	13.1	83	91	104	123	145	196	256	335	367	406	0.9 2.5	
7 CENTRAL MISSISSIPPI	20	126	62.9	.036	-	2.01	94.4	86.9	90.7	12.6	82	92	106	126	147	199	257	343	376	414	0.9 2.1	
8 LOWER MISSISSIPPI	19	131	63.0	.039	1	2.13	94.3	86.7	90.5	12.1	84	98	109	127	149	195	252	336	369	410	1.1 1.7	
9 NORTH PLAINS	13	45	63.3	.066	-	1.49	92.4	84.5	88.5	12.2	81	95	108	129	152	201	260	345	367	414	0.9 1.5	
10 CENTRAL PLAINS	21	147	63.1	.045	1	1.93	93.4	86.4	89.9	11.5	84	99	111	131	152	199	254	332	366	406	0.9 1.6	
11 SOUTH PLAINS	20	134	63.6	.041	1	2.17	93.3	86.5	89.9	11.9	85	98	110	129	150	200	256	338	374	413	1.1 1.6	
12 SOUTH TEXAS	16	84	63.6	.027	2	2.40	94.4	87.0	90.7	11.1	87	99	111	130	150	195	248	325	356	398	1.2 1.5	
13 SOUTH MOUNTAIN STATES	16	255	63.0	.043	2	1.82	92.3	85.6	89.0	11.2	87	100	113	134	155	201	254	338	374	414	1.0 1.8	
14 NORTH MOUNTAIN STATES	14	137	62.7	.062	2	1.34	93.8	86.2	90.0	12.9	84	95	106	126	150	199	254	333	371	404	1.0 2.7	
15 PACIFIC NORTHWEST	10	61	63.9	.024	1	2.03	93.4	87.1	90.3	12.3	82	95	106	125	148	196	247	334	373	408	1.0 2.2	
16 NORTH CALIFORNIA	11	71	61.2	.031	1	1.77	93.9	86.0	90.0	11.1	87	99	113	135	157	204	256	327	358	401	0.9 2.2	
17 SOUTH CALIFORNIA	11	92	60.1	.095	1	1.50	93.8	85.5	89.7	10.9	88	101	116	137	159	204	263	342	373	411	1.0 2.2	
AVERAGE	2,224	62.7	.044	1	1.88	94.0	86.5	90.3	12.1	84	96	108	128	150	199	255	336	369	408	1.0 2.1		

TABLE 4. - MOTOR GASOLINE SURVEY, WINTER 1971-72
AVERAGE DATA FOR BRANDS IN EACH DISTRICT--CONTINUED

PREMIUM-PRICE GASOLINE																								
DISTRICT NO. AND NAME	NO. OF BRANDS	GR., ASTM D267 API	SULF., ASTM D1266 WT %	GUM, ASTM D361 MG	LEAD, ASTM D524 G/GAL	OCTANE NUMBER			RVP, ASTM D323 LB	DISTILLATION, ASTM D86										RES LOSS % #				
						RES, ASTM D2699	WOT, ASTM D2700	RM ---		TEMPERATURE, F CORRECTED TO 760 MM HG	PERCENT EVAPORATED													
											IRP	5	10	20	30	50	70	90	95		EP			
1 NORTHEAST	15	82	61.5	0.021	1	2.46	100.3	92.1	96.2	12.7	80	90	104	124	149	206	257	319	348	390	1.0	2.9		
2 MID-ATLANTIC COAST	19	267	61.5	.024	1	2.37	100.4	92.4	96.4	13.0	80	91	103	125	151	209	257	323	351	394	.9	2.9		
3 SOUTHEAST	20	203	61.5	.016	1	2.56	100.2	92.4	96.3	11.6	83	97	107	130	155	207	254	325	353	397	1.1	2.2		
4 APPALACHIAN	20	186	63.1	.021	1	2.20	100.1	92.8	96.5	12.9	82	93	104	126	154	207	252	319	351	395	.9	3.2		
5 MICHIGAN	17	108	63.8	.017	1	2.27	99.8	92.6	96.2	12.8	81	91	104	128	156	210	250	320	355	400	.9	3.1		
6 NORTH ILLINOIS	14	82	64.3	.026	1	2.29	99.6	92.6	96.2	12.7	82	91	107	130	155	210	250	323	354	400	.8	2.9		
7 CENTRAL MISSISSIPPI	21	130	62.1	.024	-	2.55	99.9	92.6	96.3	12.5	81	92	108	132	159	216	259	327	358	401	.9	2.4		
8 LOWER MISSISSIPPI	20	135	62.8	.029	1	2.69	100.1	92.3	96.2	12.0	86	99	110	132	159	208	251	322	355	400	1.1	1.9		
9 NORTH PLAINS	15	51	67.7	.041	-	2.34	99.1	92.7	95.9	12.0	82	97	113	139	166	209	243	318	344	396	.7	2.0		
10 CENTRAL PLAINS	21	155	64.0	.032	1	2.30	99.6	92.3	96.0	11.4	83	97	112	135	160	210	250	320	354	403	.9	1.7		
11 SOUTH PLAINS	20	140	63.9	.028	1	2.54	99.6	92.9	96.3	11.9	85	99	112	136	163	213	255	328	363	408	1.0	1.8		
12 SOUTH TEXAS	16	89	62.0	.015	1	2.58	100.0	92.3	96.2	11.4	84	98	109	131	153	203	250	316	345	391	1.0	1.9		
13 SOUTH MOUNTAIN STATES	16	263	63.1	.027	2	2.43	98.4	91.3	94.9	11.3	86	99	113	137	162	212	256	329	364	405	1.0	1.7		
14 NORTH MOUNTAIN STATES	14	112	66.3	.047	1	2.24	99.7	91.7	95.7	12.9	84	95	108	134	162	210	244	318	356	398	.9	3.3		
15 PACIFIC NORTHWEST	10	61	64.0	.012	1	2.14	99.9	92.0	96.0	12.0	85	96	108	128	152	202	246	308	338	383	1.0	2.3		
16 NORTH CALIFORNIA	11	70	59.6	.016	1	2.52	99.9	92.0	96.0	11.4	87	96	111	136	162	211	257	322	349	396	.9	2.6		
17 SOUTH CALIFORNIA	11	94	58.4	.041	1	2.75	100.0	91.6	95.9	10.7	88	102	117	141	167	218	263	325	356	405	1.0	2.1		
AVERAGE		62.9	.026	1	2.43	99.8	92.3	96.1	12.1	83	95	109	132	158	209	253	321	353	398	.9	2.4			
SAMPLES 2,228																								

SAMPLES 2,226

TABLE 5. - MOTOR GASOLINE SURVEY, WINTER 1971-72
DATA FOR SOME ADDITIONAL GRADES

THIRD-GRADE GASOLINE

DISTRICT AND ITEM NUMBERS	SAM- PLES	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NUMBER		RVP, ASTM D323 LB	DISTILLATION, ASTM D86												RES LOSS % %	
						RES, ASTM D2699	MOT, ASTM D2700		R+M ---	TEMPERATURE, F (CORRECTED TO 760 MM HG)												
										PERCENT EVAPORATED												
										IBP	5	10	20	30	50	70	90	95	EP			
1 562	4	56.9	0.021	1	.00	91.5	82.9	87.2	10.0	83	100	113	134	159	216	278	333	358	411	0.9	1.6	
1 563	2	63.7	.017	1	.45	96.7	87.6	92.2	13.2	76	81	92	106	120	181	247	312	332	370	1.0	3.0	
1 564	6	58.2	.033	1	.43	91.8	83.5	87.7	12.0	80	93	106	132	161	222	289	360	390	416	1.0	3.5	
1 565	1	62.2	.030	1	.43	95.5	87.7	91.6	12.0	76	90	100	119	141	193	246	326	361	410	1.0	3.0	
1 566	6	64.6	.013	0	.02	92.0	83.9	88.0	10.4	84	104	112	130	150	194	230	294	315	389	.8	1.7	
1 567	4	59.9	.017	0	.34	94.7	87.2	91.0	12.6	84	90	102	123	146	212	267	317	342	395	1.0	4.0	
1 568	1	63.3	.030	2	1.09	92.6	85.3	89.0	13.1	79	81	92	112	133	188	270	357	384	428	1.0	4.0	
1 569	2	59.3	.012	0	.43	94.1	85.9	90.0	10.8	88	104	118	146	168	220	252	313	332	388	1.0	3.0	
2 570	15	61.3	.063	1	.03	92.8	82.5	87.7	10.9	86	101	112	132	153	203	262	325	350	387	.9	1.8	
2 571	11	57.3	.010	1	.03	91.8	83.4	87.6	10.7	86	102	113	134	158	218	277	330	354	406	1.0	1.9	
2 572	3	64.9	.017	1	.44	96.3	86.6	91.5	14.8	82	88	93	107	123	173	247	309	339	378	1.0	4.3	
2 573	20	60.4	.027	1	.43	91.7	83.9	87.8	11.7	80	94	106	131	156	215	278	349	377	412	1.0	2.4	
2 574	22	64.2	.008	1	.01	91.8	84.2	88.0	9.7	92	105	117	136	156	202	242	295	322	371	.9	1.9	
2 575	9	57.9	.044	1	.27	94.3	85.7	90.0	12.3	91	100	111	132	157	218	273	331	358	416	1.0	2.6	
2 576	9	62.1	.033	2	.97	92.5	85.2	88.9	14.1	80	89	96	114	135	192	266	351	378	414	1.0	3.9	
2 577	10	58.7	.010	1	.51	94.0	85.4	89.7	11.4	86	100	118	145	173	224	264	318	344	390	.8	2.6	
3 578	6	58.2	.017	2	.01	92.6	81.9	87.3	10.2	86	104	112	134	160	211	279	328	355	392	1.0	2.1	
3 579	2	60.1	.016	3	.49	97.1	86.5	91.8	11.8	86	93	106	121	136	190	244	308	323	371	1.0	2.5	
3 580	12	62.6	.048	1	.51	91.3	84.1	87.7	10.6	85	102	108	129	153	201	255	324	355	399	1.1	2.0	
3 581	22	63.4	.007	0	.00	92.0	83.9	88.0	9.9	88	101	118	141	160	210	243	311	348	395	1.0	1.3	
3 582	11	61.7	.020	1	.08	91.9	83.3	87.6	9.0	92	115	123	142	162	196	234	317	362	413	1.1	1.7	
3 583	1	60.2	.031	1	1.54	94.6	86.5	90.6	10.3	84	103	111	128	150	204	273	353	385	412	1.0	2.0	
3 584	6	60.3	.008	0	.58	94.1	85.6	89.9	10.7	84	100	115	143	180	225	266	317	345	396	1.0	1.7	
4 585	2	59.0	.043	2	.03	92.3	81.5	86.9	9.9	109	-	121	143	166	216	278	331	355	382	1.0	7.0	

TABLE 5. - MOTOR GASOLINE SURVEY, WINTER 1971-72
DATA FOR SOME ADDITIONAL GRADES--CONTINUED

THIRD-GRADE GASOLINE--CONTINUED

DISTRICT AND ITEM NUMBERS	SAM- PLES	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NUMBER		RVP, ASTM D323 LB	DISTILLATION, ASTM D86											RES LOSS %	
						RES, ASTM D2699	MOT., ASTM D2700		R+M --	TEMPERATURE, F (CORRECTED TO 760 MM HG)	PERCENT EVAPORATED										
											IRP										
												5	10	20	30	50	70	90	95	EP	
4 586	8	57.6	.021	2	.01	92.0	83.1	87.6	10.7	91	103	116	139	163	223	279	328	348	400	1.0 2.0	
4 587	1	62.4	.015	2	.42	95.4	86.9	91.2	13.5	82	-	97	120	152	207	252	325	358	408	1.0 6.0	
4 588	2	59.8	.011	1	.43	97.1	86.1	91.6	13.3	83	91	95	117	140	199	254	313	340	384	1.0 3.5	
4 589	18	60.1	.024	1	.50	91.6	83.7	87.7	11.7	82	100	111	136	161	214	273	346	375	414	1.0 2.1	
4 590	7	60.0	.027	3	.04	92.8	83.5	88.2	11.4	86	102	117	141	169	220	269	341	373	410	.9 1.5	
4 591	11	60.1	.014	1	.05	92.1	84.5	88.3	10.6	86	103	112	133	155	207	256	314	345	387	.9 2.0	
4 592	3	59.4	.003	0	.58	94.6	87.2	90.9	9.2	91	115	127	148	169	209	251	307	333	393	.8 1.5	
4 593	14	59.0	.013	1	.05	91.9	83.5	87.7	10.1	89	105	118	142	166	214	263	323	344	383	.9 2.4	
4 594	7	61.5	.029	1	.64	92.6	84.0	88.3	12.5	80	103	101	123	145	210	271	347	371	418	1.1 3.9	
4 595	5	59.3	.009	2	.51	93.9	84.8	89.4	10.0	89	105	120	144	170	218	255	311	344	389	1.0 2.7	
5 596	5	61.2	.040	2	.01	90.9	82.4	86.7	11.2	84	100	111	134	159	208	250	311	336	385	.9 2.6	
5 597	1	60.0	.007	0	.49	94.6	86.5	90.6	12.1	86	-	103	127	157	213	260	333	360	417	1.0 5.0	
5 598	5	62.3	.023	1	.40	90.5	83.5	87.0	13.2	77	89	102	127	154	208	264	343	373	420	.9 2.4	
5 599	5	60.4	.008	2	.25	91.7	83.2	87.5	11.7	83	96	111	135	161	211	259	325	351	387	.8 2.2	
5 600	5	62.1	.034	3	.02	92.7	83.2	88.0	10.6	87	103	116	139	164	216	264	345	382	425	.8 1.7	
5 601	5	60.4	.007	2	.04	92.4	84.5	88.5	10.7	88	103	113	134	158	206	249	311	341	388	.9 3.0	
5 602	5	60.8	.006	0	.49	94.0	87.0	90.5	9.7	87	109	122	145	167	210	250	311	340	390	.8 1.3	
5 603	4	57.7	.007	1	.02	92.0	83.1	87.6	8.5	94	114	128	151	173	221	272	327	349	380	.9 1.9	
5 604	3	63.8	.016	1	1.17	93.0	86.0	89.5	15.3	76	81	93	114	136	191	265	346	374	413	1.0 4.7	
6 605	5	61.7	.058	-	.00	91.3	82.1	86.7	10.7	89	99	117	136	151	204	245	323	353	398	.9 2.1	
6 606	3	58.7	-	-	.02	91.7	82.6	87.3	10.0	82	100	120	151	178	230	273	346	380	424	.8 1.2	
6 607	3	59.7	-	-	.03	92.0	83.3	87.7	9.4	84	105	122	148	174	222	262	336	370	408	.9 1.1	
6 608	7	60.4	-	-	.00	91.9	84.4	88.2	11.5	88	91	114	137	148	206	242	306	330	344	.6 1.4	
6 609	2	64.3	-	-	.47	93.9	88.6	91.3	13.0	78	86	106	139	172	216	248	314	342	380	.8 3.7	

TABLE 5. - MOTOR GASOLINE SURVEY, WINTER 1971-72
DATA FOR SOME ADDITIONAL GRADES--CONTINUED

THIRD-GRADE GASOLINE--CONTINUED

DISTRICT AND ITEM NUMBERS	SAM- PLES	GR., ASTM D267 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NUMBER		RVP, ASTM D323 LB	DISTILLATION, ASTM D86											RES LOSS % %		
						RES, ASTM D2699	MOT, ASTM D2700		R+M ---	TEMPERATURE, F (CORRECTED TO 760 MM HG)	PERCENT EVAPORATED											
											IBP											
												5	10	20	30	50	70	90	95		EP	
6 610	2	57.8	-	-	.39	93.6	86.2	89.9	12.4	80	92	112	144	174	216	248	294	316	378	.6	3.4	
7 611	7	62.8	.052	-	.00	91.3	81.8	86.6	10.2	89	101	118	137	156	207	255	291	347	403	.8	1.5	
7 612	3	62.2	-	-	2.28	93.4	86.2	89.8	12.5	86	100	113	132	152	200	262	335	377	410	1.0	1.5	
7 613	9	61.7	.052	-	.55	91.5	84.3	87.9	11.1	84	101	113	133	154	204	258	328	358	392	1.1	1.5	
7 614	7	58.2	.048	-	.05	92.0	83.6	87.8	10.0	85	108	123	146	170	217	256	323	352	405	.7	1.8	
7 615	15	60.6	.049	-	.00	91.8	84.3	88.1	10.9	86	96	116	138	151	205	241	313	343	388	.8	1.2	
7 616	1	61.8	-	-	.00	90.9	81.2	86.1	-	-	-	-	-	-	-	-	-	-	-	-	-	
8 617	5	58.9	.020	-	.00	92.4	81.7	87.1	10.5	88	109	120	139	160	215	277	330	356	379	1.0	1.5	
8 618	6	62.6	-	-	2.14	94.0	86.2	90.1	12.5	84	99	112	134	158	207	267	342	378	418	1.1	1.5	
8 619	11	60.9	.017	1	.45	91.5	84.6	88.1	11.0	82	100	111	132	156	206	260	326	353	404	.9	1.8	
8 620	11	62.1	.018	-	.00	92.2	83.8	88.0	10.5	86	106	116	137	159	209	246	322	367	409	1.0	1.5	
8 621	2	66.8	-	-	.00	92.3	84.5	88.4	-	-	-	-	-	-	-	-	-	-	-	-	-	
8 622	1	62.5	-	-	.00	91.3	82.3	86.8	8.9	88	-	120	135	-	187	-	307	-	410	1.0	3.0	
8 623	7	58.9	.014	-	.85	94.0	85.3	89.7	9.9	85	109	118	144	175	223	266	317	346	391	1.0	1.6	
8 624	1	66.3	.021	1	.07	91.8	84.0	87.9	11.3	84	-	109	132	154	196	232	320	-	402	1.4	1.6	
9 625	3	65.8	.022	-	.00	91.3	80.2	85.8	10.2	88	106	120	141	161	200	243	304	332	370	.6	.9	
9 626	3	64.6	.043	-	1.51	91.8	84.8	88.3	12.4	78	88	100	118	136	176	234	326	366	410	.7	1.3	
9 627	4	58.6	.020	-	.00	91.8	84.2	88.0	9.1	84	109	128	156	184	224	262	334	366	404	.8	1.2	
9 628	3	64.9	.042	-	.00	90.9	84.5	87.7	11.9	80	94	113	142	178	222	247	308	338	382	.5	3.0	
10 629	9	59.2	.046	1	.01	91.2	80.9	86.1	10.7	85	102	115	139	162	212	261	314	338	380	1.0	1.3	
10 630	3	57.1	.013	-	.00	91.3	83.6	87.5	9.8	86	104	120	144	171	228	274	340	364	404	.5	1.5	
10 631	9	65.2	.034	-	1.66	92.6	85.5	89.1	12.3	83	95	103	124	144	191	247	323	363	403	1.0	1.3	
10 632	4	63.3	.080	1	.79	91.5	84.4	88.0	11.0	84	103	111	131	150	198	253	331	354	413	1.0	1.5	
10 633	5	61.3	-	-	.00	92.1	84.1	88.1	8.8	90	112	126	149	171	210	246	296	322	379	.8	1.3	

TABLE 5. - MOTOR GASOLINE SURVEY, WINTER 1971-72
DATA FOR SOME ADDITIONAL GRADES--CONTINUED

THIRD-GRADE GASOLINE--CONTINUED

DISTRICT AND ITEM NUMBERS	SAM- PLES	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NUMBER		RVP, ASTM D323 LR	DISTILLATION, ASTM D86											RFS LOSS % %	
						RES, ASTM D2699	MOT., ASTM D2700		R+M --	TEMPERATURE, F (CORRECTED TO 760 MM HG)	PERCENT EVAPORATED										
											IBP	5	10	20	30	50	70	90	95	EP	
10 634	3	67.5	-	-	.42	92.7	88.1	90.4	12.5	85	93	106	127	155	207	236	296	337	381	1.0	2.5
10 635	2	62.1	-	-	.00	91.0	82.3	86.7	-	-	-	-	-	-	-	-	-	-	-	-	-
10 636	2	56.6	.033	-	.3A	92.2	83.0	87.6	9.7	88	101	116	142	170	232	283	341	372	426	1.0	1.0
10 637	1	66.2	.040	1	1.2A	92.0	85.5	88.8	11.4	88	-	106	121	135	169	227	322	-	412	1.2	1.8
11 638	1	61.8	.024	1	1.4A	92.7	86.7	89.7	12.8	89	-	103	124	147	198	255	331	-	424	1.2	2.3
11 639	6	61.5	.034	-	2.0A	93.6	86.9	90.3	12.0	85	98	111	133	158	213	269	348	381	425	1.0	1.5
11 640	5	62.3	.041	1	.9A	92.2	84.6	88.4	11.7	83	106	107	128	149	199	258	335	355	411	1.1	1.7
11 641	2	63.0	-	-	.00	92.2	84.6	88.4	-	-	-	-	-	-	-	-	-	-	-	-	-
11 642	2	58.6	-	-	.3A	94.6	87.1	90.9	-	-	-	-	-	-	-	-	-	-	-	-	-
11 643	6	61.7	.026	1	.30	93.5	85.4	89.5	10.7	86	107	121	148	174	215	245	304	333	383	1.0	1.1
12 644	5	58.0	.019	2	.01	91.3	83.9	87.6	10.0	91	105	120	139	165	218	261	321	351	394	1.0	1.5
12 645	6	62.8	.026	-	2.13	93.9	86.6	90.3	11.9	86	99	112	130	149	194	251	323	354	392	1.3	1.3
12 646	1	60.4	-	1	1.0A	96.3	87.6	92.0	11.0	-	-	-	-	-	-	-	-	-	-	-	-
12 647	7	60.5	.032	1	.41	91.6	83.9	87.8	9.9	88	102	115	136	158	209	259	325	357	396	1.0	1.3
12 648	4	66.8	.014	2	.00	91.9	84.2	88.1	9.0	93	109	122	137	153	193	226	268	297	344	1.0	1.8
12 649	3	60.0	.010	-	.3A	94.3	87.4	90.9	11.6	81	97	111	135	161	221	271	319	347	403	1.0	1.0
12 650	5	60.5	.014	3	.3A	94.1	85.6	89.9	11.1	85	99	115	140	165	217	253	314	336	390	1.0	2.0
13 651	6	60.7	-	-	.00	89.3	81.2	85.3	11.3	86	100	115	141	168	221	268	332	361	407	.7	1.6
13 652	3	58.8	-	-	.00	91.8	83.1	87.5	9.0	90	109	120	140	160	214	265	318	336	393	.6	.4
13 653	10	63.9	-	-	2.00	91.5	85.3	88.4	11.5	82	95	107	129	151	196	244	331	375	426	1.1	1.3
13 654	9	61.3	.130	2	2.02	92.5	85.2	88.9	11.1	87	99	113	133	156	204	259	336	368	417	.9	1.8
13 655	9	65.2	-	-	.00	91.4	84.0	87.7	9.5	92	107	121	143	166	206	237	291	326	378	.8	.7
13 656	2	56.5	-	-	.41	94.2	85.1	89.7	-	-	-	-	-	-	-	-	-	-	-	-	-
13 657	7	56.5	.030	4	.04	91.2	83.3	87.3	8.0	90	115	132	161	190	236	283	348	384	432	1.0	1.7

TABLE 5. - MOTOR GASOLINE SURVEY, WINTER 1971-72
DATA FOR SOME ADDITIONAL GRADES--CONTINUED

THIRD-GRADE GASOLINE--CONTINUED																						
DISTRICT AND ITEM NUMBERS	SAM- PLES	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	DCTANE NUMBER		RVP, ASTM D323 LB	DISTILLATION, ASTM D86											RES LOSS %		
						RES, ASTM D2699	MOT, ASTM D2700		R+M ---	TEMPERATURE, °F (CORRECTED TO 760 MM HG)												
										PERCENT EVAPORATED												
										IBP	5	10	20	30	50	70	90	95	EP			
13 658	7	60.9	-	-	.82	93.4	86.4	89.9	9.2	92	116	127	155	191	220	262	323	359	400	.9	1.4	
14 659	2	66.5	-	-	.00	91.2	80.8	86.0	11.3	83	101	112	130	146	190	226	280	305	350	.8	1.7	
14 660	3	62.1	.092	-	1.40	92.7	85.0	88.9	12.5	83	94	106	126	151	203	258	332	378	406	.8	2.2	
14 661	8	62.3	.027	-	.00	91.5	83.5	87.5	1.5	90	115	122	144	178	234	254	315	359	403	.7	1.3	
14 662	5	62.2	.019	2	.00	91.3	83.7	87.5	7.7	97	118	132	154	173	213	254	312	340	382	.9	.9	
15 663	3	56.8	.077	-	.00	91.3	82.6	87.0	8.4	96	118	132	157	183	226	279	346	370	408	1.0	.0	
15 664	3	66.1	.005	-	3.18	90.9	87.4	89.2	12.9	83	103	114	133	152	189	234	295	323	364	.9	2.1	
15 665	3	62.0	.018	-	.00	91.7	83.6	87.7	10.6	87	104	116	136	157	199	237	308	354	400	.8	.7	
15 666	1	65.8	.013	-	.40	92.4	86.9	89.7	10.2	90	110	119	137	155	192	232	297	333	385	1.0	.0	
15 667	4	60.6	.016	1	.00	90.8	82.5	86.7	7.4	101	120	130	147	163	200	244	319	354	411	1.0	.5	
16 668	4	56.6	.060	2	.00	91.3	82.3	86.8	6.3	96	114	126	151	176	230	279	333	357	402	.9	1.1	
16 669	5	60.5	.010	2	1.59	91.1	85.2	88.2	9.0	91	108	122	145	169	217	267	326	352	396	.8	1.3	
16 670	6	59.2	.010	1	.00	92.0	83.2	87.6	9.5	92	111	125	148	171	214	257	325	354	404	.9	1.6	
16 671	4	60.5	-	-	.46	94.3	86.7	90.5	9.6	92	110	122	139	156	197	243	318	349	406	.9	.9	
16 672	5	59.1	.010	2	.56	91.2	81.9	86.6	7.7	99	117	129	145	161	197	241	311	342	403	.9	1.2	
16 673	3	56.3	-	-	.01	95.3	85.6	90.5	9.6	90	104	119	143	171	231	288	339	356	397	.7	1.3	
17 674	6	58.4	.020	1	.44	92.1	83.6	87.9	9.8	93	105	121	141	162	221	270	320	348	400	1.0	1.6	
17 675	4	59.5	.110	1	.01	91.6	83.3	87.5	11.0	85	102	110	130	152	202	265	349	367	420	1.0	1.1	
17 676	10	60.0	.030	2	.01	91.7	82.9	87.3	9.7	94	112	124	144	163	204	255	328	364	410	1.1	1.4	
17 677	4	58.9	-	-	.42	94.1	86.0	90.1	10.9	87	102	119	144	171	221	273	361	389	428	.9	1.4	
17 678	8	59.8	.100	2	.04	91.7	83.0	87.4	8.0	101	122	134	151	170	208	255	312	350	395	1.0	.8	
17 679	6	55.6	.010	1	.10	91.9	83.3	87.6	9.0	94	112	127	153	181	222	264	319	338	394	1.1	1.3	
17 680	1	58.0	-	-	.48	94.0	85.1	89.6	11.0	92	-	114	141	-	218	-	340	-	410	-	-	
AVERAGE		61.0	.029	1	.59	92.6	84.4	88.5	10.7	87	102	114	136	160	209	257	323	353	398	.9	2.0	
SAMPLES		665																				

TABLE 5. - MOTOR GASOLINE SURVEY, MINIER 1971-72
DATA FOR SOME ADDITIONAL GRADES--CONTINUED

SUPER-PREMIUM GASOLINE

DISTRICT AND ITEM NUMBERS	SAM- PLES	GR., ASTM D287 API	SULF., ASTM D1266 WT %	GUM, ASTM D381 MG	LEAD, ASTM D526 G/GAL	OCTANE NUMBER		RVP, ASTM D323 LB	DISTILLATION, ASTM D86																	RES LOSS % %	
						RES, ASTM D2699	R+M --2		TEMPERATURE, F (CORRECTED TO 760 MM HG)																		
							R+M --2		PERCENT EVAPORATED																		
									IBP	5	10	20	30	50	70	90	95	EP									
1 700	1	60.8	0.017	1	3.36	102.6	94.3	98.5	13.7	72	82	94	116	141	203	248	310	346	398	1.0	4.0						
2 701	2	56.0	.019	1	.04	101.5	90.0	95.8	13.1	89	-	104	137	171	222	251	310	-	372	1.0	4.8						
2 702	2	65.0	.022	1	1.43	101.2	91.3	96.3	13.7	76	-	98	119	139	186	230	300	-	378	1.3	2.5						
2 703	1	57.8	.027	1	2.83	101.2	91.8	96.5	12.0	85	-	109	134	161	217	258	318	-	379	1.3	2.7						
2 704	1	57.1	.015	1	.96	100.9	92.7	96.8	11.4	85	-	109	148	187	236	263	312	-	387	1.9	4.2						
2 705	6	60.8	.019	2	3.41	102.6	94.1	98.4	14.1	81	86	98	118	144	208	253	319	350	399	1.1	4.2						
2 706	1	55.4	.029	1	3.08	101.2	91.2	96.2	10.2	82	-	108	136	163	217	255	316	-	378	.7	2.3						
2 707	3	55.7	.034	1	2.25	101.3	91.5	96.4	10.7	84	-	117	150	180	228	261	313	-	390	1.0	2.1						
2 708	1	60.0	.034	1	3.23	101.1	91.7	96.4	9.4	76	-	90	123	152	211	262	332	-	412	1.0	6.0						
3 709	1	64.8	.018	1	1.70	101.3	91.5	96.4	12.9	82	-	99	118	140	193	231	290	-	357	1.1	1.9						
3 710	1	59.9	.015	1	3.33	102.7	93.8	98.3	9.8	80	98	108	130	156	210	250	313	346	396	1.0	4.0						
3 711	1	62.1	.080	1	3.61	101.3	92.4	96.9	12.0	86	-	114	145	173	216	247	320	-	385	1.0	3.0						
4 712	3	60.1	.010	1	2.31	102.0	93.2	97.6	14.0	82	90	100	123	150	209	250	306	314	378	1.1	4.7						
4 713	1	64.0	.035	1	2.92	101.0	92.7	96.9	12.6	81	-	105	130	156	209	255	335	-	419	1.3	2.2						
4 714	1	63.6	.034	1	3.69	100.9	93.7	97.3	12.8	78	-	96	125	157	215	255	324	-	397	1.2	3.8						
4 715	1	64.2	.070	1	3.14	100.9	92.0	96.5	12.4	83	-	103	128	154	209	253	331	-	421	1.2	2.8						
5 716	2	61.5	.006	1	2.28	102.6	93.7	98.2	15.2	81	-	93	117	146	210	249	302	324	365	1.9	7.2						
8 717	1	57.9	.025	1	2.48	100.9	93.0	97.0	12.0	84	-	108	128	153	210	260	316	-	373	1.2	.8						
10 718	1	63.8	.037	1	2.72	100.9	92.0	96.5	11.9	73	-	100	127	155	200	234	286	-	346	1.5	2.0						
AVERAGE		60.6	.029	1	2.57	101.5	92.5	97.0	12.3	81	89	103	129	157	211	251	313	336	386	1.1	3.4						
SAMPLES																											

TABLE 7. - Cumulative percents of samples of all grades by motor octane numbers by districts, motor-gasoline survey, winter 1971-72

Motor octane number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Cumulative total samples
79			0.2						0.9									1
80									1.8	0.6								5
81		0.3	.4	0.2			1.0	0.6	5.5	2.3			1.0	0.7				32
82	0.5	1.3	2.1	.6	2.3	2.2	2.0	1.9	6.4	3.2			1.4	2.6	1.5	5.8	1.7	94
83	3.2	3.6	3.7	5.1	7.2	5.4	4.1	3.1	10.1	4.4		0.5	2.1	7.5	5.9	8.7	10.9	230
84	8.6	9.3	9.9	12.8	10.3	7.6	8.1	7.1	19.3	7.8	1.3	6.2	7.5	12.7	7.4	12.2	16.2	485
85	10.7	13.6	12.2	14.7	12.5	11.4	12.8	12.1	45.0	20.9	6.0	9.5	23.9	31.8	8.8	18.6	32.8	871
86	23.5	26.4	25.5	25.9	24.0	19.5	22.6	28.9	53.2	39.0	23.7	17.5	43.4	42.7	18.4	42.4	50.2	1,601
87	43.3	50.7	49.3	50.0	51.0	45.9	44.3	51.6	53.2	48.0	50.8	47.4	51.2	51.3	44.1	55.8	58.1	2,606
88	52.9	56.0	54.7	57.7	58.2	54.6	56.4	56.5	56.9	54.1	52.8	56.9	55.2	55.8	52.9	58.7	59.0	2,914
89	54.0	57.9	56.3	58.3	58.2	56.2	56.4	57.8	59.6	55.5	53.2	58.3	60.6	59.2	53.7	59.3	59.0	3,001
90	57.2	59.4	59.0	60.0	58.2	56.2	56.8	57.8	60.6	56.1	53.8	59.2	65.9	60.3	55.1	59.3	59.0	3,081
91	58.8	64.3	62.5	62.6	61.6	57.3	59.8	62.1	62.4	60.8	55.2	61.1	70.0	68.2	69.1	68.6	74.2	3,321
92	82.9	80.6	79.3	73.1	77.9	67.0	75.3	88.5	72.5	78.8	71.2	72.0	82.6	89.9	88.2	91.3	97.4	4,190
93	98.9	96.3	98.8	93.4	93.9	89.2	94.6	99.1	83.5	94.5	88.6	94.3	91.1	98.9	97.1	100.0	100.0	4,960
94	100.0	99.7	100.0	99.4	98.5	97.3	100.0	100.0	93.6	99.1	96.3	99.1	97.9	100.0	100.0			5,171
95		100.0		100.0	99.2	99.5			97.2	100.0	100.0	99.1	100.0					5,212
96					100.0	100.0			99.1			99.5						5,218
97									100.0			100.0						5,220

TABLE 8.- Locations and numbers of samples, motor gasoline survey, winter 1971-72

State	Location	Samples	State	Location	Samples
<u>District 1 (Northeast)</u>			<u>District 11 (South Plains)</u>		
Maine	Portland	50	Kansas	Coffeyville	6
Massachusetts	Boston area	137		McPherson	10
	2 Locations	187		Wichita	64
				Springfield	20
<u>District 2 (Mid-Atlantic Coast)</u>			Missouri	Bartlesville	6
Connecticut	Hartford	3	Oklahoma	Oklahoma City	6
D.C., Md., Va.	Washington area	5		Tulsa	104
Maryland	Baltimore	111	Texas	Dallas-Fort Worth	83
New Jersey and New York	New York City area	215		8 Locations	299
New York	Albany	11			
	Syracuse	6	<u>District 12 (Southern Texas)</u>		
Pennsylvania	Harrisburg	18	Texas	Beaumont	8
Pennsylvania and New Jersey	Philadelphia area	195		Houston	161
Virginia	Richmond	114		San Antonio	42
	9 Locations	678		3 Locations	211
<u>District 3 (Southeast)</u>			<u>District 13 (South Mountain States)</u>		
Alabama	Birmingham	95	Arizona	Phoenix	86
	Mobile	33		Tucson	28
Florida	Jacksonville	42	California	Bakersfield	14
	Miami area	59	Colorado	Denver	104
	Port Everglades	3	Nevada	Las Vegas	27
	Tampa	14		Reno	24
Georgia	Atlanta	140	New Mexico	Albuquerque	101
	Savannah	9	Texas	Amarillo	84
North Carolina	Charlotte	3		El Paso	24
	Wilmington	46		Lubbock	24
South Carolina	Charleston	3	Utah	Salt Lake City	58
Tennessee	Chattanooga	34		11 Locations	574
	Knoxville	2			
	13 Locations	483	<u>District 14 (North Mountain States)</u>		
<u>District 4 (Appalachian)</u>			Idaho	Boise	67
New York	Buffalo	105	Montana	Billings	52
Ohio	Cincinnati	124		Great Falls	4
	Cleveland	118	Washington	Pasco	34
	Columbus	20		Spokane	110
	Toledo	7		5 Locations	267
Pennsylvania	Pittsburgh	82	<u>District 15 (Pacific Northwest)</u>		
West Virginia	Charleston	12	Oregon	Portland	14
	7 Locations	468	Washington	Seattle	122
<u>District 5 (Michigan)</u>				2 Locations	136
Michigan	Detroit	227	<u>District 16 (Northern California)</u>		
	Northern Peninsula	36	California	San Francisco Bay area	172
	2 Locations	263		1 Location	172
<u>District 6 (North Illinois)</u>			<u>District 17 (Southern California and Hawaii)</u>		
Illinois and Indiana	Chicago area	143	California	Los Angeles area	175
Iowa	Davenport	2		San Diego	17
Wisconsin	Green Bay	12	Hawaii	Honolulu	37
	Madison	25		3 Locations	229
	Milwaukee	3			
	5 Locations	185			
<u>District 7 (Central Mississippi)</u>			<hr/>		
Indiana	Evansville	39	Total	90 locations	5,226
	Indianapolis	96	<hr/>		
Kentucky	Louisville	71			
Missouri and Illinois	St. Louis area	93			
	4 Locations	299			
<u>District 8 (Lower Mississippi)</u>			<hr/>		
Arkansas	El Dorado	2	District	Locations	Samples
	Little Rock	86			Percent
Louisiana	Baton Rouge	35	1	2	187
	Lake Charles	2	2	9	678
	New Orleans	86	3	13	483
Mississippi	Jackson	14	4	7	468
Tennessee	Memphis	95	5	2	263
	Nashville	2	6	5	185
	8 Locations	322	7	4	299
<u>District 9 (North Plains)</u>			8	8	322
Minnesota	Minneapolis-St. Paul	91	9	2	109
North Dakota	Williston	18	10	5	344
	2 Locations	109	11	8	299
<u>District 10 (Central Plains)</u>			12	3	211
Iowa	Des Moines	152	13	11	574
Kansas	Phillipsburg	10	14	5	267
Kansas and Missouri	Kansas City area	97	15	2	136
Nebraska	Omaha	75	16	1	172
	Scotts Bluff	10	17	3	229
	5 Locations	344	Total	90	5,226
					100.0

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